

**IDENTIFICATION, DESCRIPTION AND COLLECTION
OF COFFEE TYPES
IN
P.D.R. YEMEN**

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**Technical Report of Mission Undertaken
from
15 April to 7 May 1989
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**Montpellier, France
May 1989**

Contents

	Page
1. Major Conclusions and Recommendations	3
2. Acknowledgements	6
3. Introduction	7
4. Background Information	7
4.1 Coffee Growing in PDR Yemen	8
4.2 Flowering and Harvest of Coffee	6
4.3 Cultural Practices	10
4.4 Diseases and Pests	10
4.5 Research and Extension	
4.6 Genetic Variability	
5. Coffee Areas Visited	11
6. Methodology Applied for the Coffee Survey	11
7. Major Coffee Types Found	12
7.1 Description	12
A. Essaii	12
B. Odaynii	13
C. Tessawi	14
D. Katii	15
E. Ludia Compact	15
F. Hewle Compact	16
7.2 Comparison with Coffee Types Described in the A.R. Yemen	16
8. Geographic Distribution of Coffee types	17
8.1 Yaffaa district	17
8.2 Rusud district	18
8.3 Dhala district	21
9. Description of Coffee Samples	21
10. Follow-up Activities	22
Annex I - Localization of Coffee Areas in PDR Yemen	23
Annex II - Map of Yaffaa and Rusud Districts	24
Annex III - Map of Dhala District	25
Annex IV - Collection Forms	26
Annex V - Persons met and Travel Schedule	70

1. Major Conclusions and Recommendations

- Due to its traditional social value, the high number of farmers involved, and its special way of cultivation on high valued terrace land, the importance of the coffee crop in PDR Yemen is certainly higher than expected from the statistics on the number of trees cultivated. Actually, the crop has gained importance due to the need for export revenues.

- In order to increase production and productivity, research and extension should be initiated without delay. Due to the relatively high level of education of most farmers, a significant return of research and extension can be expected on a short term.

- Major restraints on coffee productivity in PDR Yemen are periodical droughts in certain areas, severe mineral deficiencies (nitrogen, iron, zinc and other minor elements), attack of berry borer and leaf miner, lack of information on coffee growing in other countries, lack of adequate water supply and lack of a pruning system. Exposure to full sun is not considered as a limiting factor, in fact, it should be considered as a positive factor if production capacity is to be increased.

- Production of coffee in PDR Yemen has decreased during the last decades due to competition for suitable land with food crops, with qat, and due to periodical droughts. In certain areas, like Dhala, the number of trees cultivated has apparently declined with about 75%. This tendency endangers the conservation of genetic variability. Another contributing factor to the genetic erosion is the replacement of old coffee populations by young more vigorous homogenous varieties, as observed during the mission. Therefore, the objective of the present mission was to identify and describe the available variability as well as to preserve it in live collections.

- On the basis of the information obtained during visits to the major coffee areas in PDR Yemen, the existing variability has been described. Variation was observed for most characters like plant type, growth habit, plant height, angle and strength of primaries, degree of secondary branching, colour of leaf flushes and of adult leaves, size and shape of leaves, size and shape of fruits and beans, and presence of seed defects (elephant beans). Little variation was found for fruit colour (red), percentage of peaberries (low) and nearly all fruit types were slightly flattened. Vigour and productivity might be estimated as average to good.

- Six major coffee types have been identified and described. Four are widely grown in the Yaffaa and Rusud areas, two compact types were identified in the Dhala region. The characteristics of these varieties show that the Yemenese farmers have selected for adaptability to the traditional multiple stem - no pruning system, for relative good yielding capacity and bold fruit size.

- According to the origin and local identification by farmers, the four major coffee types can be named as Essaii, Odaynii, Katii and Tessawi. The two compact variants were named as Ludia and Hewle, the name of the valleys where they were identified.

- Out of the 22 coffee samples made, 15 represent the 6 coffee types described. Seven samples were taken from local variants or from very old coffee trees.

- Within all coffee types, residual variability has been observed, which would permit for further selection. The Odaynii type appeared most variable, whereas Essaii, Katii and Tessawi showed less variation. Odaynii is also most widely grown in nearly all valleys visited whereas the distribution of Katii and Essaii is more limited. Tessawi, a very vigorous variety with bold fruits and beans, is preferred by the farmers for the start of new plantations. However, this variety contains high percentages of elephant beans.

- The type of variability present in the coffee populations in PDR Yemen shows some resemblance with that found in the Yemen Arab Republic, as described in reports of FAO missions. Exchange of coffee varieties between the two countries and regional varietal trials are of interest to establish the exact relationship between the coffee types found in these countries.

- Priorities for selection and breeding activities in PDR Yemen are: 1. Further identification and evaluation of the coffee types found by observations to be made in the collection and variety trials; 2. Further selection within and purification of the coffee types described; 3. Selection and multiplication of productive coffee types with large fruits but with low percentage of elephant beans; 4. Testing of the different coffee types under high density planting.

- Priorities for research in agronomy are high density planting, fertilization experiments, development of adequate pruning systems for old and young plantations, management of irrigation and control of the two major pests: coffee berry borer and leaf miner. The use of windbreaks might be studied in certain areas where cold or hot winds damage the plantations.

- A detailed study on the biology and importance of the berry borer, *Virachola bimaculata*, should be undertaken in order to increase knowledge on this pest of high potential importance also for other coffee areas. As a start, a consultancy of an entomologist should be undertaken in the near future.

- Priorities for post harvest studies are the use of small drying machines, storage of coffee, the production of green coffee and quality control. It is recommended that an expert in coffee technology visit the country soon to advise.

- The implementation of a regional project with international funding for coffee improvement in PDR Yemen, the Yemen Arab Republic and Saudi Arabia is of great interest due to the similarities in coffee growing conditions and problems faced, in these countries.

2. Acknowledgements

First of all, the numerous coffee growers in PDR Yemen are to be acknowledged for their valuable information and hospitality. Dr. Abdul W.O. Mukred, Director of the Research and Extension Department of the Ministry of Agriculture of PDR Yemen is thanked for his direct participation in this mission and organization of local activities. Further thanks go to the Deputy Director of the Research and Extension Department, Dr. Abdulla Ali Abdulla, to the Director of the El-Kod Research Center, Dr. Ab.S. Mu'Allem, to Mr. Moustapha M. Saqqaf for his participation, to the Directors of Agriculture in the Rusud and Yaffaa districts, Messrs. Ali Salem and Abdul - Rab Saleh Ali, respectively, to the extension agents in these areas, to the coffee grower Mr. Ahmed Sales Hanash for his information and hospitality and, last but not least, to the driver Mr. Surur whose enthusiasm and great ability to drive on the difficult highland tracks made the trip more pleasant and comfortable.

3. Introduction

The objective of the present mission was to study variability present in the coffee population in PDR Yemen, to identify the major coffee types grown and to preserve the germplasm in collections in and outside the country. The major coffee growing areas in the Yaffaa, Rusud and Dhala districts were visited. Information has been obtained by morphological observations and by discussions with farmers. The description of the major coffee types given in this report needs to be confirmed and improved by further evaluation of the collection and variety trials. Some recommendations are given on coffee research activities to be initiated in PDR Yemen.

4. Background Information

4.1 *Coffee growing in PDR Yemen*

Coffee cultivation started in PDR Yemen at least 3 to 4 centuries ago. Very old coffee trees can be found in traditional coffee growing valleys. Coffee grows on terraces in the bottom of valleys at altitudes ranging from 700 to 2,000 meters, but mostly from 1,200 to 1,800 meters. No data on rainfall in the coffee growing areas are available. However, rainfall is too limited and erratic to allow for rainfed coffee cultivation. Most coffee is flood-irrigated but in many areas supplemental well irrigation is applied in the dry season.

Coffee production in PDR Yemen has decreased during the last decades due to periodic droughts, destruction of terraces by floods, and competition for arable land with food crops and qat. The present increased interest in the coffee crop is due to the high prices paid. Consequently, many young coffee plantations are present.

Statistics on coffee cultivation have recently become available from the 1984/85 census. Total area under cultivation was estimated to be about 1,250 ha, with the number of trees being about 750,000. However, the tree number is probably underestimated as farmers tend to inform lower than real figures. From an average planting density of about 1,000 trees per ha, as observed during this survey, one expects the real tree number to be about 1,250,000.

No statistics are available on production. Productivity figures given by farmers range from 0.5 to 2.0 kg. of green coffee per tree, therefore, the production capacity of coffee in PDR Yemen might be somewhere between 800 to 1,500 tons per year. Some potential exists for expansion of the coffee area, especially when funds become available for reconstruction of flood-damaged terraces. In some areas, new valleys can be occupied.

Coffee is sold by the farmers as dried berries for about 3 dinar per kg (official rate 0.29D= 1 US\$). Part of the crop used to be smuggled to North Yemen and was apparently traded from there to other Arab countries. However, last year the government started buying coffee from the farmers in order to obtain export revenues. The coffee land and trees are highly valued in PDR Yemen; one tree plus its land may be worth from US\$ 1,000 to 1,500.

4.2 *Flowering and harvest of coffee*

Flowering of coffee occurs at the beginning of the two rainy periods, from March to May and from July to August, being more advanced at lower altitudes than at higher altitudes. Consequently, a small harvest is obtained in November-December-January, the main harvest being from February to April. At lower altitudes due to higher temperatures, development and ripening of the berries is quicker, the main harvest being in February/March. Due to this cropping pattern, at the time of the present mission ripe berries were found only from 1,600 m upwards. Most of the coffee was already harvested, but remaining ripe berries were often present.

4.3 *Cultural practices*

Cultural methods used in PDR Yemen comprise planting of about 9 months old bare-rooted seedlings grown in small private nurseries which are overshadowed and lack fertilizer. Consequently, the seedlings are weak and need heavy shading after transplanting to the field. When replanting old coffee trees, a large planting hole is usually prepared, in some instances up to 1.50 m deep and 1.00 in diameter. These holes are filled with fresh soil which surely is a great advantage for the development of the seedlings and longevity of the trees. Planting densities applied vary from about 2 x 2 meters to 4 x 4 meters, or even 4 x 5 meters, depending mainly on the variety. Vigorous and strong varieties, like Tessawi and Odaynii, are planted at large distances providing enough space and light to the plants which grow up individually in a cylindrical shape to a height of 5 to 6 meters. Less vigorous varieties or varieties with more flexible branches are normally planted at higher plant density and a closed canopy is obtained when plants grow older. Varieties of short stature and more compact growth, as those found in the Ludia valley in the Dhala district, are planted at densities of about 2 x 2 meters.

Farmers induce multiple stems by bending young plants. Depending on the variety, few to many branches may develop. Old plantations contain trees with multiple stems. Each stem contains several heads, forced by farmers by pruning of the growing point at about 1.5 m height or naturally by bending down of branches. Consequently the shape of the plants varies according to the pruning applied and the flexibility of the branches.

Irrigation is practiced by flooding of the terraces in rainy periods and as supplemental well irrigation in the dry periods. One flood irrigation seems to provide enough water to adult plants for 3 to 4 months. The floods carry new soil deposits to the terraces, which increase slowly in height. Incoming sand at the beginning of the terraces is periodically removed from the plantation. The base of the stems of old trees is generally 30 - 40 cm below the level of the soil.

Most soils are sandy-loam alluviates, with pH of 7.5 to 8.0. Due to the high pH and leakage of minerals at heavy floods, strong mineral deficiencies have been observed in most wadies - iron, nitrogen and zinc deficiencies being more frequent. Due to these deficiencies entire plantations may show yellowish leaves. Also symptoms which resemble toxicity of chlore, with necrosis of the leaf tip, have been observed.

Most farmers do not apply fertilizers. Some reasoned that fertilization may cause over-bearing and die-back of branches. However, others use 20 to 40 l of cattle manure per tree in one application per year. In the El Hanashry valley (Rusud district), where very light sandy soils are present, fertilization is apparently a common practice. One farmer applied three bags of manure per plant per year. Consequently no deficiencies were present in this valley and plant growth was abundant.

Most of the coffee plantations grow without shading. Only in a few valleys some plantations were partly shaded by *Ziziphus* trees. Exposure to full sun does not apparently affect the development of plants, at least not when nutrition is sufficient.

Intercropping of coffee with annual crops is a common practice, especially in young plantations. The annual crop is often planted too close to the coffee plants, thus causing competition for water and nutrients. This practice, and lack of fertilization, appears to be the main reasons for the bad development of many younger plantations.

4.4 *Diseases and pests*

Fungal leaf diseases of coffee are rare in PDR Yemen. Although reported in North Yemen, during the visit no leaf rust was found. Only slight attacks of *Cercospora* were present here and there. Die-back of a few coffee trees has been observed on two terraces in the Said valley. In both cases the trees were located at the entrance of the flood water. Neighbouring trees showed leaf necrosis beginning on lower branches. The cause of this die-back is unknown and needs to be investigated.

Pests are of more importance, the most frequent observed being coffee berry borer, reportedly identified as *Virachola bimaculata*, and coffee leaf miner (*Leucoptera coffeella*). According to local observations, the coffee berry borer may cause losses up to 20%. This Lepidopterous pest occurs in Africa but not in South America (Le Pelley, Pests of Coffee, Longmans, 1968). The larvae of the insect destroy completely the seeds of young or adult fruits, leaving one or two big holes in the fruit exocarp. Due to its potential importance, this pest deserves to be studied in detail. Coffee leaf miner intensity varied greatly between valleys, most showing average to light attacks. Heavy attacks were observed, for example, in the Yahar valley. Also, in the same valley attacks of white mites were observed, which could be related to the usage of insecticides. Also, some incidence of fruit fly was observed, whose attack may depreciate the value of the husk for preparation of Kishr or Kahaa, the local coffee drinks.

4.5 *Research and extension*

At present, no research structure for coffee exists in the country, although funds may become available shortly to create a small research center in one of the coffee growing areas. The government operates two nurseries, one in the Rusud area and one in Laudar, which provide a few thousand seedlings per year to be distributed freely to the farmers. Private farmers sometimes maintain nurseries, especially in traditional coffee valleys like Ayasa and Shaab el Arab. Two extension workers are based in the coffee areas, however information on coffee growing practices in other countries is very limited.

4.6 *Genetic variability*

No documented information was available on the genetic variability in the coffee population of PDR Yemen. Dr. N. Walyaro, in the report on his FAO mission carried out in December 1987 to PDR Yemen, has called attention to the need to study the variability and create collections in order to avoid genetic erosion. His report also provides valuable background information on coffee growing in PDR Yemen as well as recommendations for research.

5. Coffee Areas visited

The two major coffee areas in PDR Yemen are the Yaffaa and Rusud districts (see Annex I), each with a similar amount of coffee trees. The two areas are geographically adjacent and connected by one valley. A third area of less importance is the Dhala district. Due to severe drought and competition of gat, the number of coffee trees has been reduced by about 75% in this area.

The main coffee producing valleys, especially the traditional ones with old plantations, were visited. Some important valleys could however not be fully surveyed, due to inaccessability (like Ayasa valley). Most of the valleys visited are indicated on the maps of Annexes II and III. A complete list of valleys visited is presented under item 8.

6. Methodology Applied for the Coffee Survey

The variation of the coffee populations was studied by observing the following plant characters (see annex IV):

- tree: shape, growth habit, height and number of stems or heads.
- primaries: angle of 10th node (semi-erect=about 45°, nearly horizontal=about 67° and horizontal is 90° angle with main stem), intensity of secondary branching, internode length, and strength of primaries.
- leaves: colour of flushes and of adult leaves, size, shape and surface characteristics.
- fruits: number per axil, size and shape of fruits, size of discs.
- beans: size, shape and occurrence of seed defects (pea-berries, elephant beans).

Many of the observed characters are affected by environment. Therefore, the description of the samples given in Annex IV should be considered only as indicative, and would need further confirmation by observation in the life collections to be established from the seed samples.

The morphological observations have been completed by the information given by farmers, mainly on local naming of coffee types, fertilizer usage, vigour and production capacity.

The main objective of the survey was to describe the existing variation and identify major coffee types. Out of the 22 samples obtained, 13 represent variation within the four major coffee types, two represent compact types found only in the Dhala district and 7 samples represent local variants.

Due to the lack of enough ripe berries for individual tree sampling, most samples are composed by mixture of seeds harvested from more than one tree. The degree and type of variability found between trees sampled together is indicated on the collecting forms (Annex IV).

7. Major Coffee Types Found

7.1 *Description*

The major coffee types described represent coffee populations with several important characteristics in common. Within each type variants may be found, which could be considered as varieties or land races.

The description of the six distinct coffee types identified is as follows:

A. *ESSAI*

Coffee variety occurring mainly in old plantations, predominant in several valleys of the Yaffaa district, like Yahar, Dinakheb and Tullub. The meaning of Essai is 'from Ayasa', which is a traditional valley in the Yaffaa area for production of coffee seedlings. Sample number PRDY 006 is most representative for the Essai type.

The Essaii type is considered a regular bearer, quite productive and rather vigorous. Trees are of medium size, growing to about 4 meter height. A typical characteristic is the great flexibility of its stems, each forming multiple heads due to bending of productive branches. The shape of the young tree with one stem is conical, with quite open growth. Old trees grow bushy, with multiple stems and many small heads showing frequent die-back of short primaries after bearing. Primaries are relatively thin and may break easily, specially of younger plants and at lower altitudes. The angle of the primaries with the main stem is nearly horizontal to semi-erect. The internode length is intermediate.

The young leaf flushes are light bronze to green. The leaf shape is that of 'typica' (narrow and pointed), but a certain variation can be found. Leaf size is average. The fruits are medium sized to small, with elliptic rounded shape. The pulp is very sweet. The seeds are medium to small, with elliptic or elliptic rounded shape. Some variants show a certain percentage of elephant beans.

Due to its characteristics, the Essaii type resembles somewhat the Arabica (Typica) variety, excepts for its smaller more rounded fruits and lighter bronze or green leaf flushes.

B. ODAYNII

Most widely found, variable coffee type. Odaynii means 'coming from Udayni' a coffee area in the Yemen Arab Republic (YAR). Its characteristics are however different from the Udayni variety reported in YAR. In the Tullub valley, the Odaynii type was also called Sairy (coming from Sair, a side valley of the Shaeab el Arab valley). However, in the Said valley very few Odaynii types were found, mainly Tessawi types. Sample number PDRY 018 has been chosen as most representative for the Odaynii type.

This type is vigorous and apparently highly productive when young, but less adapted to the no pruning system, becoming less productive when aged. It is a quite irregular bearer (more pronounced biennial bearing), showing severe symptoms of die-back of branches after a high production year. The tree is slightly taller than Essaii, with fewer and less flexible main stems, which tend to break easier and form fewer heads than Essaii.

The primaries are nearly horizontal. Young leaf flushes are green to light bronze, adult leaves are of average size to large, with shape intermediate between 'bourbon' and 'typica'. The leaf surface is quite flat.

Fruits have a similar shape than Essaii (elliptic rounded), but may vary considerably in size, normally being slightly bigger than those of Essaii.

The beans are medium sized, elliptic-elongated and variation for the percentage of elephant beans can be found, however generally being quite low. The endosperm is often incompletely developed, irregular shaped and with quite deep furrows.

Great variability within this coffee type can be found in the Shaebe el Arab valley, whereas in other valleys the Odaynii type is more fixed (like in the Hamoma valley).

C. TESSAWI

This very vigorous coffee variety is present in most young plantations in the Rusud area and also, less frequent, in Yaffaa. Old plantations of this type can be found in the Shaebe el Arab and Tessa valleys. Tessawi means 'from Tessa' a valley in the Rusud area uniformly planted with this type.

The Tessawi type was identified by some farmers as 'Matari', but this name should not be adopted as the Matari variety reported in the Yemen Arab Republic is definitely a different type.

Sample number PDRY 010 has been chosen as a representative for the Tessawi type. Variants resembling this coffee type are PDR 004, 005 and 014.

The characteristic features of Tessawi are its great vigour and productivity, rather compact cylindrical growth, tall size (reaching 6 meters in 12 years), strong stems and primaries, bronze coloured leaf flushes and large dark green adult leaves, bold fruits with medium to large discs, large irregularly formed seeds, due to high percentages of elephant beans, present in all representatives of this type.

Due to its vigour and erect growth habit, the spacing adopted for this variety is generally wide (4 x 4 or 4 x 5 meters).

D. KATII

Katti means 'coming from Katy' which is the higher part of the Shaeab el Ermy valley, where it occurs quite uniformly in old plantations. This coffee is represented by samples PRDY 015, 015A and 016.

This interesting productive type has large elongated fruits and low percentages of elephant beans. The plant growth is somewhat intermediate between Odaynii and Essaii. Branches are quite flexible, resulting in multiple stems and heads for old plants. The angle of primaries varies from nearly horizontal to semi-erect. Leaf flushes are bronze to light bronze. Adult leaves are of intermediate shape between 'bourbon' and 'typica' types and of average size. The fruits are large, elongated elliptic, with small to medium sized discs. The seeds are also large, uniformly elongated elliptic and normally a low percentage of elephant beans is found.

E. LUDIA COMPACT

This type was found in plantations in the lower part of the Ludia valley (Dhala district). This type resembles a more compact Essaii type. The representative sample is PRDY 020.

Plants are less vigorous with short stature. Tree shape is conical, with thin rather drooping primaries. The angle of the 10th node is nearly horizontal. Internode length is short. Leaf flushes are light bronze, leaves are small and of 'typica' shape. Fruits and beans are small, elliptic rounded. Very few elephant beans were present.

F. HEWLE COMPACT

This type was only identified in some plantations in the Hewle valley (side valley of Ludia). It resembles a more compact Odaynii types, but could also be related to Tessawi. The representative sample is PDRY 022.

Plants are vigorous with compact growth, and apparently good production capacity. Main stems are strong.

Primaries are nearly horizontal. Leaf flushes are light bronze, adult leaves dark green and quite large with shape resembling the 'bourbon' type. Fruits are medium sized to large, elliptic rounded with average to small discs. Seeds are medium sized to large, elliptic rounded with a rather high percentage of elephant beans.

7.2 *Comparison with Coffee Types Described in the Yemen, Arab Republic (Y.A.R.)*

A comparison has been made with the coffee varieties described by Cambrony, Vincent and Weber, in their report on an FAO mission to YAR carried out in 1975. Many of the same typical characteristics seem to be present in YAR, but the combination of the characteristics in the varieties described seems to be different. It could be that the coffee varieties in YAR and PDR Yemen have a similar origin but that the characteristics, due to crossing and recombination, have been fixed in different ways. The relative isolation between coffee valleys is an excellent opportunity for fixation of characters and variety development.

From the available information, one might conclude that some resemblance exists between the following varieties of YAR and PDR Yemen respectively: Udayni and Ludia Compact, Dohäiri and Odaynii, Touhafari and Katii and Shibregghi and Tessawi.

The exact relationship between the varieties in both countries can only be studied by establishing mixed collections or variety trials.

8. Geographic Distribution of Coffee Types

8.1. *Yaffaa district* (see Annex II)

- **Dinakheb (or Dhi Nakhib) valley** (1400 - 2000m):

Traditional coffee valley with predominantly Essaii in old plantations, young plantations with mixture of Essaii, Odaynii and Tessawi types. Some local variants were found, like PRDY 009 and 012.

- **Yahar valley** (700-1630m):

Predominantly Essaii type, variants with more erect branching or more greenish leaf tip colour can be found.

- **Maarabn valley** (910 - 1480m):

This valley forms a link between Yaffaa and Rusud coffee areas. Essaii type with quite erect-branching dominates in lower part of the valley. An interesting variant with stronger primaries and variable leaf-flush colour was identified at 1150m altitude, but no ripe fruits were present. At higher part of the valley Katii, Odaynii and Tessawi types can be seen, some in very old plantations.

- **Saeed Tullub valley** (1480 - 1700m):

Main coffee types are Essaii and Odaynii or intermediate types, often in mixed old plantations. In young plantations also Tessawi is present

- **Ayasa valley** (2000 - 2180km):

Only the highest part of this traditional valley could be visited. Coffee was present at 2180m altitude, but only at protected side of the valley. Wind damage was present and coffee may be affected by frosts. Coffee grows more compact at this altitude. The population sampled (PRDY 013) seems different from major coffee types. Some compact plants with small fruits were seen, which resembled Essaii.

- **Hatib valley:**

This traditional side valley of Ayasa could not be visited due to the bad condition of the road.

8.2 **Rusud district** (See Annex II)

- **Tessa (Tisah) valley** (1350-1570m):

Lower part of the valley was severely affected by drought. All coffee seen is of Tessawi type, with some variation. A search was made to find Tessawi trees with low percentage elephant beans, but without success. One rather compact variant was found, only a few berries could be collected (PDRY 014A)

- **Erka (Irqah) valley** (1320 - 1500m):

Traditional valley with old plantations. At highest part Odaynii type with smaller leaves was found. Lower down Katii (PDRY015) was found and also Essaii and Odaynii.

- **Haddak valley** (1260-1300m):

Small valley more recently occupied. Coffee plantations varied between 10-30 years in age. Tessawi type is dominating.

- **Marsa valley** (1310 - 1340m):

The valley similar to Haddak, except that also some Kattii plantations were found.

- **Shewaha valley** (1320-1370m):

Relative young plantations, with Tessawi type dominating.

- **Agberein valley (1280-1400m):**

At lowest part of the valley a young plantation with quite compact variable Tessawi type plants was found (variation for flush colour, leaf surface characteristics, fruit shape and size). This seems a segregating population and possibly plants with low% elephant beans can be found. Very few berries were present, so no sample could be taken. Many other populations in the valley showed a similar aspect, others showed a mixture of Tessawi and Katii types.

- **Said (Saeed) valley (1310 - 1500m):**

Old coffee plantations of Essaii or Katii types, younger plantations are Tessawi. Farmers indicate Tessawi type as Odaynii.

- **Shaeab el Ermi valley (1600-1700m):**

At lower part Essaii or Odaynii types were seen. A sample (PRDY 017) was taken from a plantation with off-season ripening, affected by floods. The coffee type looked like Odaynii, but more compact.

- **Katii valley (1700 - 1850m):**

This is the upper part of the Shaeab el Ermi valley. Very old plantations are present, mainly of Katii type (PRDY 016)

- **Hamoma (Hamümah) valley:**

Traditional valley with old plantations. Dominating type is Odaynii (PRDY 018). The existing variation suggests that selection of Odaynii with large fruits and low % elephant beans might be possible.

- **Shaeab el Arab and side valley Saïr (1600 -1750m):**

Traditional valleys with all very old plantations. Seems origin of Odaynii type, but in plantations variation between Odaynii and Tessawi types were normally present, most plants having high % of elephant beans (Saïr valley). Lower in valley the dominating type appeared to be Odaynii, but variability was always present. Signs of over-bearing and off-season fruiting were very common.

- **Rabat area and El Khadira town (\pm 1300m):**

Mainly young plantations with Tessawi or Odaynii types. Some Tessawi types had green leaf flushes. In El Khadira a very old plantation with mixture of Tessawi, Katii and Odaynii types was being replaced with Tessawi seedlings. The state coffee farm in the Rabat area (1300m) will be used to plant the collection and variety trial. Two plots were selected with each about 1800m².

- **Zalaman valley (1650-1800m):**

Very ancient valley, occupied before Christ. Some very old coffee plantations still exist, but most are young (5-15 years). Coffee is often replaced by qat. A sample was taken from a very old plantation with coffee plants resembling Odaynii or Katii (PRDY 019). Younger plantations show similar variation.

- **El Hanashy valley (1330-1450m):**

Valley with relative young vigorous plantations. The soil is very sandy, the vigour and dark green colour of the leaves must be due to heavy manuring. The dominating coffee type seems to be Odaynii, with plants growing very tall. No ripe berries were present.

8.3 *Dhala district* (see Annex III)

- **Hardaba valley** (900-950m):

On the way to Dhala two plantations were found, one of local origin and the other resembling Tessawi. The local variant could be of some interest (small dark green leaves, strong primaries, fruits of medium size), but no ripe berries were present.

- **Shuaib (Sha'ib) area** (\pm 1900m):

Near the Awabel town Odaynii type plants were seen and also a more compact type.

- **Ludia valley** (1500-1700m):

The lower part of the valley had suffered from prolonged drought. Three coffee types were distinguished in this valley:

a) a rather compact type with small 'typica' shaped leaves and small fruits (named as 'Ludia Compact', sample PDRY 020);

b) Odaynii-like type with relatively small leaves, and

c) a compact type with larger leaves and fruits, found in the Hewle side valley (sample PDRY 022, named as Hewle Compact).

A compound sample was made of the types found in the Ludia valley (PDRY 021).

9. **Description of Coffee Samples**

The origin and characteristics of the coffee samples taken is given on the collecting forms (see Annex IV).

10. Follow-up activities

Instructions were given for the construction of a seed bed at the government coffee nursery in the Rusud area. Detailed information has been given on the lay-out of the collection (22 samples) and variety trial (8 representative samples for the coffee types found: PDRY 005, 007, 011, 014, 015, 016, 018 and 022).

A randomized block design is recommended with 6 blocks and 4 plants per block, planted in rows at 3 x 2 m spacing.

It is proposed that similar observations as those made during this coffee survey should be systematically made on the coffee collection and variety trial. Data to be obtained from the collections should be exchanged to be able to better characterize the coffee material sampled.

LAHEL

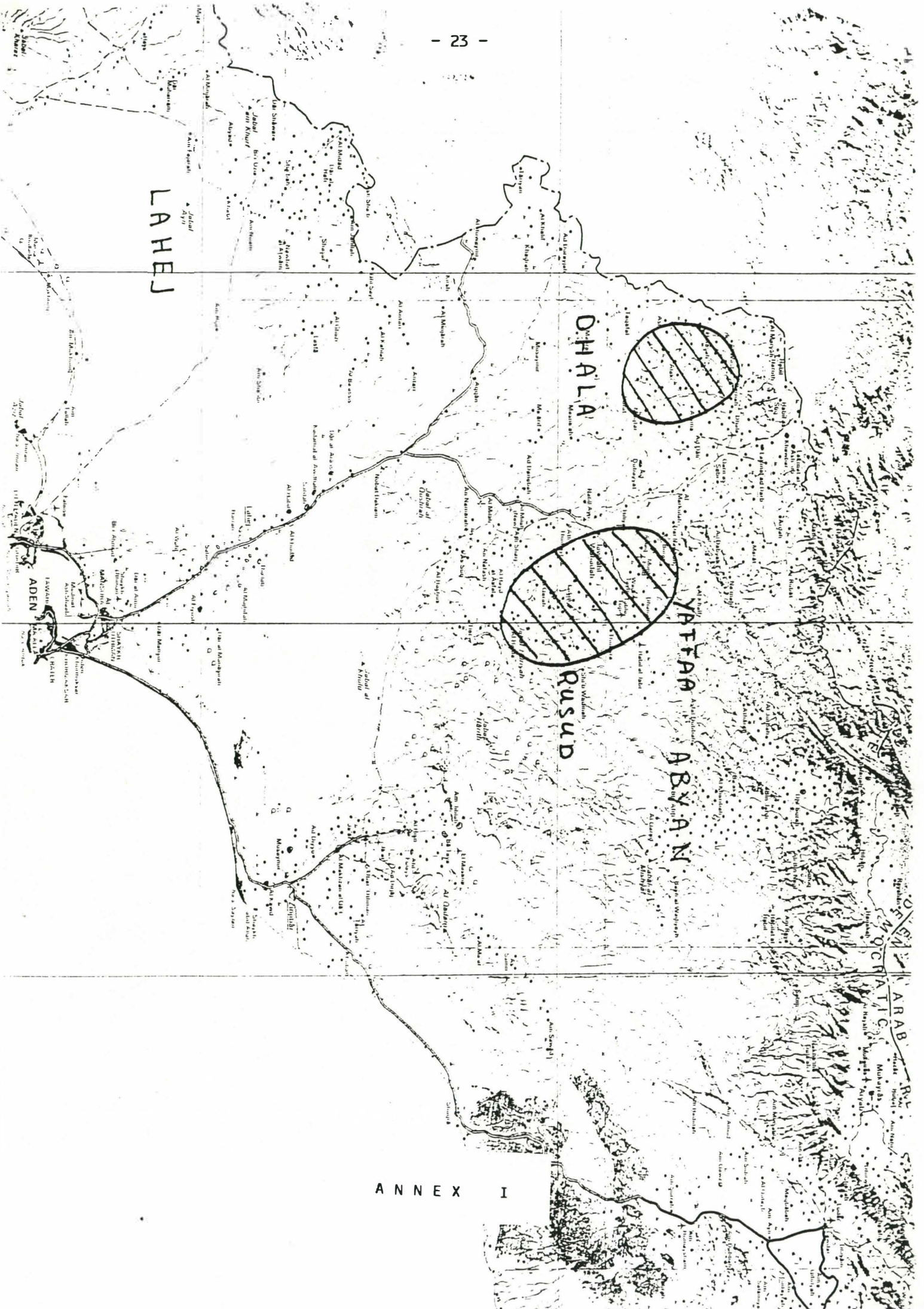
DAHALA

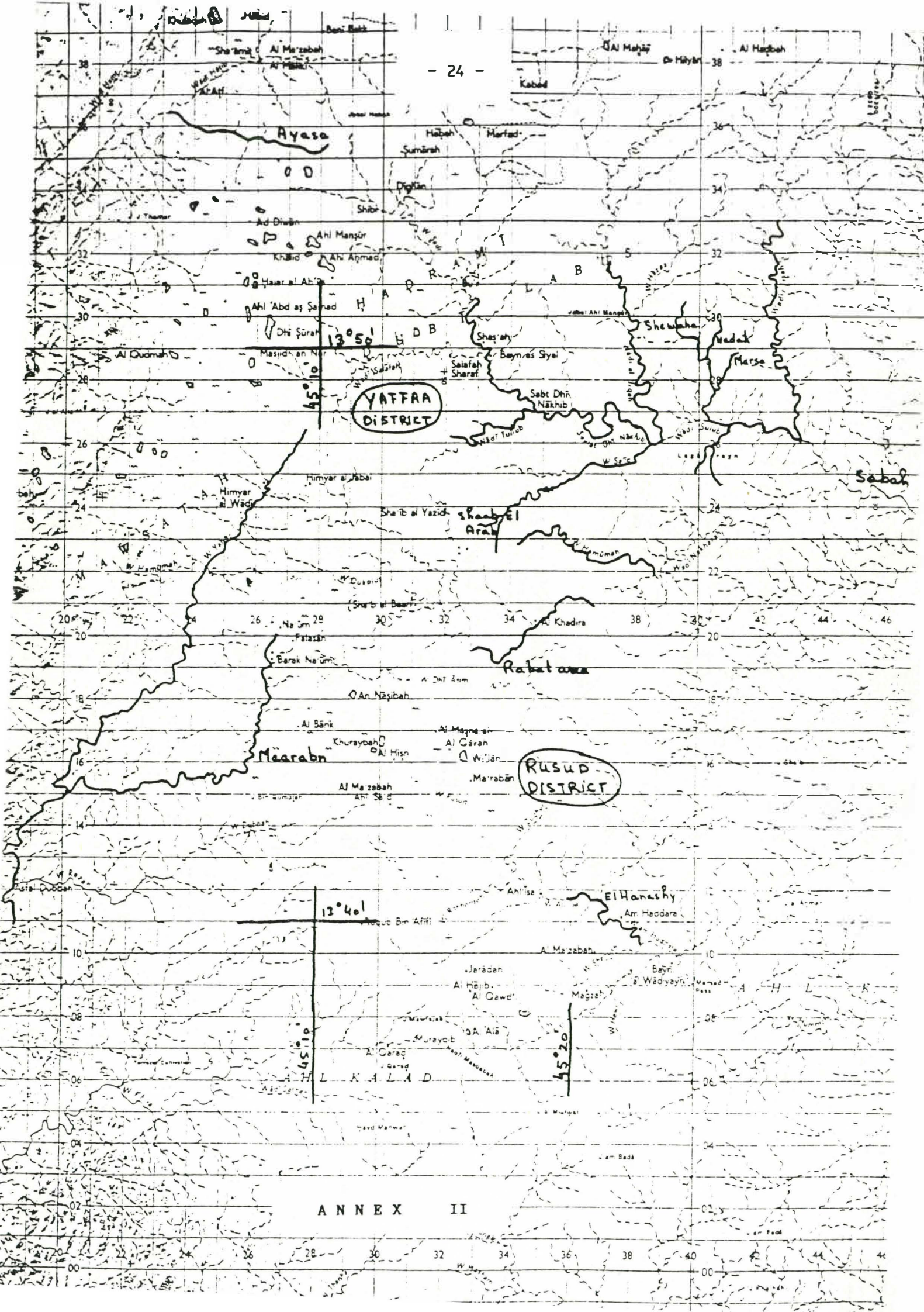
YATFAA

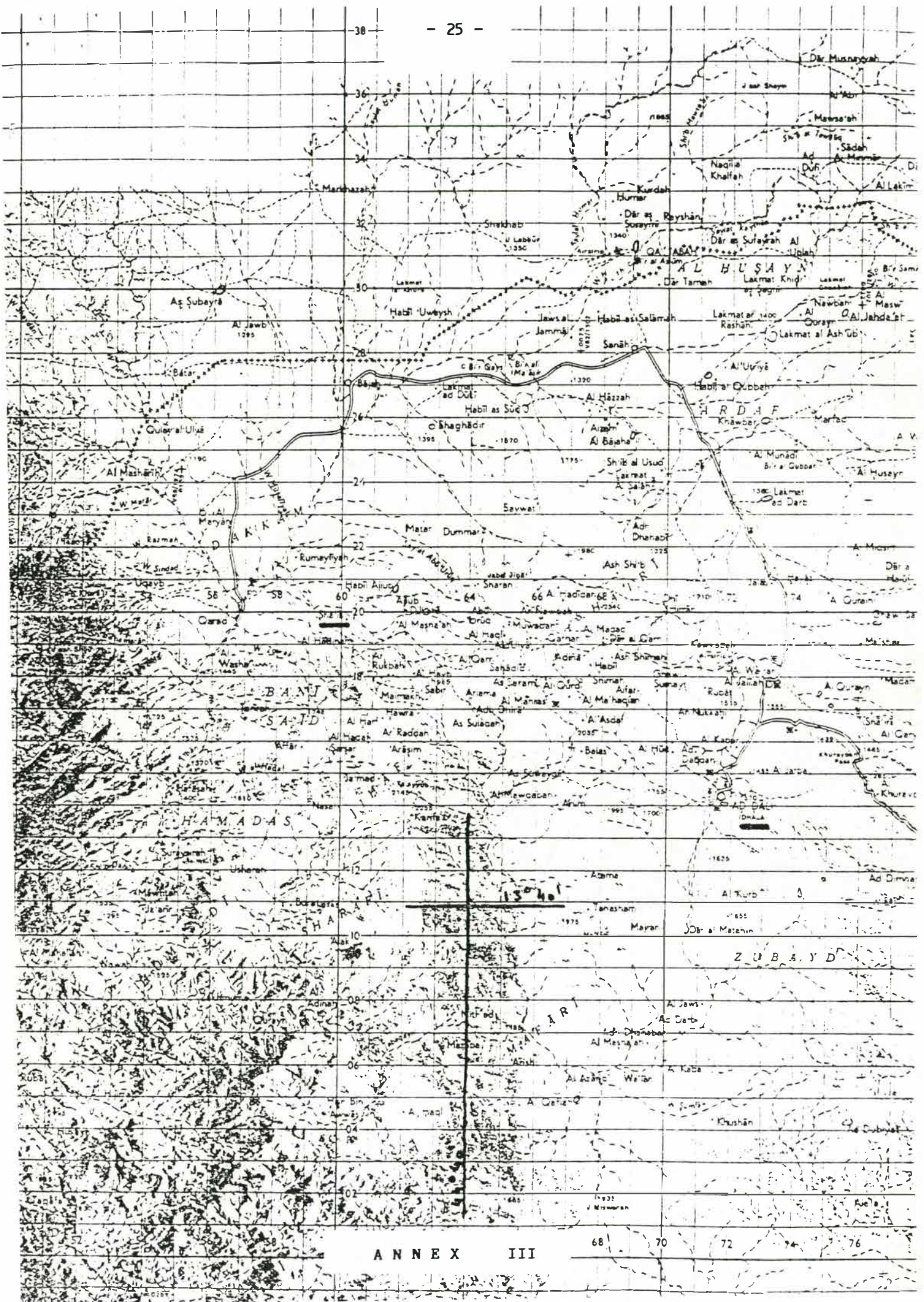
ABYAN

RUSUD

ANNEX I







ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/ AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 001* 3. SITE NAME *Hashsh*

4. DATE *17.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *local population*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa district, Yahar valley*

12. LOCATION *80 Km from Aden in a north direction*

13. LAT *45° 07' N* N/S LONG *13° 46' E* E/W ALTITUDE *1440 m*

14. MAP NAME AND REFERENCE *ANNEX I and II*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *160* AREA *2500* sq. metres

19. NUMBER OF PLANTS SAMPLED *30* AREA sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Randomly*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 001*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 001 Irrigation: Flood
Plant age: variable, most old Spacing: 4x4
Soil texture: sandy loam Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/> conical	<input checked="" type="checkbox"/> intermediate	<input type="checkbox"/> cylindrical
Growth habit:	<input type="checkbox"/> open	<input checked="" type="checkbox"/> normal	<input type="checkbox"/> compact
Height:	<input checked="" type="checkbox"/> tall	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small
Nr. of stems or heads:	<input type="checkbox"/> one	<input checked="" type="checkbox"/> few	<input type="checkbox"/> many

Primaries:

Angle (10th node):	<input type="checkbox"/> semi-erect	<input checked="" type="checkbox"/> nearly hor.	<input type="checkbox"/> horizontal
Secondary branching:	<input type="checkbox"/> profuse	<input type="checkbox"/> normal	<input checked="" type="checkbox"/> slight
Internode length:	<input type="checkbox"/> long <input checked="" type="checkbox"/> medium <input type="checkbox"/> short <input type="checkbox"/> very short		
Strength:	<input type="checkbox"/> thin-drooping	<input checked="" type="checkbox"/> average	<input type="checkbox"/> thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/> bronze	<input checked="" type="checkbox"/> light bronze	<input type="checkbox"/> green
Colour adult leaves:	<input type="checkbox"/> dark green	<input checked="" type="checkbox"/> green	<input type="checkbox"/> light green
Size:	<input checked="" type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input checked="" type="checkbox"/> typica	<input checked="" type="checkbox"/> intermediate	<input type="checkbox"/> bourbon
Surface:	<input type="checkbox"/> ondulated	<input type="checkbox"/> intermediate	<input checked="" type="checkbox"/> flat

Fruits:

Nr. per axil:	<input type="checkbox"/> many	<input checked="" type="checkbox"/> average	<input type="checkbox"/> few
Size:	<input type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> pointed <input type="checkbox"/> elongated <input checked="" type="checkbox"/> elliptic <input type="checkbox"/> rounded		
Size of disc:	<input type="checkbox"/> large	<input type="checkbox"/> medium	<input checked="" type="checkbox"/> small

Beans:

Size:	<input type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input checked="" type="checkbox"/> small
Shape:	<input type="checkbox"/> pointed <input type="checkbox"/> elongated <input checked="" type="checkbox"/> elliptic <input type="checkbox"/> rounded		
Pea berries:	<input type="checkbox"/> many	<input checked="" type="checkbox"/> few	<input type="checkbox"/> none

Seeds:

Elephant beans (%):	<input type="checkbox"/> high <input checked="" type="checkbox"/> medium <input checked="" type="checkbox"/> low <input type="checkbox"/> none
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Comments: Possibly related to the Odaynii type or a mixture of Odaynii and Essaii. Variation existed for leaf shape and size and for colour of the leaf flushes.
Some of the young trees resembled the 'Java' variety grown in the Cameroon.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 002* 3. SITE NAME *SADR*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY

8. LOCAL NAME *Bon*

LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa/Dinakheb valley*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1960 m*

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *40* AREA *200* sq. metres

19. NUMBER OF PLANTS SAMPLED *10* AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Randomly*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 002*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr:002

Irrigation: *flood + well*

Plant age: 6 years

Spacing: 2 X 2.5 m

Soil texture: *sandy loam*

Fertilization: *no*

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 2

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: *High altitude coffee, which might be affected by frost. Uniform plantation of young trees. Might be related to Odaynii. Productive rather compact grower. About 15% elephant beans were present. Origin of coffee seedlings in Ayasa valley. Little variation was present among sampled trees.*

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 003* 3. SITE NAME *SADR*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *resembling Odaynii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa/Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *North* direction

13. LAT $45^{\circ}15'N$ N/S LONG $13^{\circ}50'$ E/W ALTITUDE *1890 m*

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *50* AREA *450* sq. metres

19. NUMBER OF PLANTS SAMPLED *5* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Most productive ones*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 003*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 003

Irrigation: flood + well

Plant age: ± 6 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2

Vigour (1-5): 3

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input checked="" type="checkbox"/>	open	<input type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input checked="" type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input type="checkbox"/>	average	<input checked="" type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input type="checkbox"/>	low	<input checked="" type="checkbox"/>	none
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Comments: Type resembling most to Odaynii, with strong lateral branches and quite profuse secondary branching. Conical, open growth habit, rather tall trees. No seed defects were observed. Little variation was present between sampled trees.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/ AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 004* 3. SITE NAME *Sadr*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *likely Tessawi type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION \pm 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1870* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *50* AREA *450* sq. metres

19. NUMBER OF PLANTS SAMPLED *3* AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Most productive ones*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 004*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 004

Irrigation: flood + well

Plant age: 5 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: ?

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 4

Vigour (1-5): 4

Tree:

Shape:	<input type="checkbox"/>	conical	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/>	bronze	<input type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input checked="" type="checkbox"/>	many	<input type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input checked="" type="checkbox"/>	high	<input type="checkbox"/>	medium	<input type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Tessawi type with quite compact growth. Productive and vigorous. Population was rather uniform, with some variation for the angle of the primaries.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 005* 3. SITE NAME *-*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Tessawi type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15'N$ N/S LONG $13^{\circ}50'E$ E/W ALTITUDE *1810* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *50* AREA *450* sq. metres

19. NUMBER OF PLANTS SAMPLED *3* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *most productive ones*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 005*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 005

Irrigation: flood

Plant age: 6 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: ?

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 5

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input checked="" type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input checked="" type="checkbox"/>	high	<input type="checkbox"/>	medium	<input type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Origin of plants is lower part of the valley. Uniform Tessawi type, with quite open growth, later ripening and less bronze leaf flushes.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/ AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 006* 3. SITE NAME *Bor*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Essaii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1790* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *500* AREA *8000* sq. metres

19. NUMBER OF PLANTS SAMPLED *5* AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Randomly*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 006*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr:006

Irrigation: *flood*

Plant age: ± 50 years

Spacing: 4 X 4 m

Soil texture: *sandy loam*

Fertilization: *no*

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 2

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input checked="" type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input checked="" type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Essaii type with some variation for angle of primaries and colour of leaf flushes. Bean shape is elliptic, some elliptic-pointed.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 007* 3. SITE NAME *Hanaka*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Essaii or Odaynii*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT / VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1630* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND 2 AREA 10 sq. metres

19. NUMBER OF PLANTS SAMPLED 2 AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Farmers indication of Odaynii type*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *Yes, PDRY 008*

22. PHOTOGRAPH NUMBER *PDRY 007*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr:007

Irrigation: *flood + well*

Plant age: \pm 55 years

Spacing: 2,5 x 2 m

Soil texture: *sandy loam*

Fertilization: *no*

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Farmer identified type as Odaynii, but due to seed characteristics could be rather an off-type of Essaii. The sample was taken from two plants within an Essaii plantation (sample PDRY 008).

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 008* 3. SITE NAME *Hanaka*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Essaii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1630* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar /landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *400* AREA *2500* sq. metres

19. NUMBER OF PLANTS SAMPLED *5* AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Randomly*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *Yes, PDRY 007*

22. PHOTOGRAPH NUMBER *PDRY 008*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr:008

Irrigation: *flood + well*

Plant age: \pm 55 years

Spacing: 2,5 X 2,5 m

Soil texture: *sandy loam*

Fertilization: *no*

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 2

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input checked="" type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input checked="" type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: *Essai type as PDRY 006, but slightly smaller leaves and fruits. Beans are elliptic to elliptic-pointed.*

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/ AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 009* 3. SITE NAME *Baynassyal*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *local type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1630* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *10* AREA *35* sq. metres

19. NUMBER OF PLANTS SAMPLED *7* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Plants with remaining fruits*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 009*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 009

Irrigation: flood + well

Plant age: 5 years

Spacing: 3 X 3,5 m

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input checked="" type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input checked="" type="checkbox"/>	many	<input type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Local coffee population, showing some variation mainly for the colour of flushes and angle of primaries.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 010* 3. SITE NAME *Asfal Tulub*

4. DATE *18.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Tessawi type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1480* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *60* AREA *960* sq. metres

19. NUMBER OF PLANTS SAMPLED *6* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *With remaining fruits*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 010*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 010

Irrigation: flood + well

Plant age: 6 years

Spacing: 4 X 4 m

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input checked="" type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input checked="" type="checkbox"/>	horizontal
Secondary branching:	<input checked="" type="checkbox"/>	profuse	<input type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input checked="" type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	bourbon
Surface:	<input checked="" type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input checked="" type="checkbox"/>	high	<input type="checkbox"/>	medium	<input type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Tessawi type with very large fruits and beans. About 70% of elephant beans.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 011* 3. SITE NAME *Saeed Tullob*

4. DATE *19.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Odaynii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Tullob*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15'$ N/S LONG $13^{\circ}50'$ E/W ALTITUDE *1700* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *100* AREA *900* sq. metres

19. NUMBER OF PLANTS SAMPLED *4* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Representative plants*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 011*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 011

Irrigation: flood

Plant age: 60 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input checked="" type="checkbox"/>	open	<input type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	slight
Internode length:	<input checked="" type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Odaynii type of unknown origin. Quite vigorous and productive. Bean size larger than PDRY 008; elliptic or elliptic-pointed seeds.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 012* 3. SITE NAME *El-Mazik El-Garf*

4. DATE *19.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *local type*

8. LOCAL NAME *Bon*

LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Dinakheb*

12. LOCATION ± 80 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15'$ N/S LONG $13^{\circ}50'$ E/W ALTITUDE *1730* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace

4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard

5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *12* AREA *192* sq. metres

19. NUMBER OF PLANTS SAMPLED *2* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Two productive plants*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 012*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 012

Irrigation: *yes, flood only*

Plant age: *8 years*

Spacing: *4 X 4 m*

Soil texture: *sandy loam*

Fertilization: *no*

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): *3*

Vigour (1-5): *3*

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input checked="" type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: *Local coffee type, intermediate between Essai and Odaynii. Two productive plants were sampled.*

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/ AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 013* 3. SITE NAME *El-Haql*

4. DATE *20.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *local population*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Yaffaa / Ayasa valley*

12. LOCATION ± 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}10' N$ N/S LONG $13^{\circ}55' E$ E/W ALTITUDE *2120* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *11* AREA *99* sq. metres

19. NUMBER OF PLANTS SAMPLED *6* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Representing variability of population*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 013*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 013

Irrigation: flood + well

Plant age: 20 to 50 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: yes, cattle manure

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2

Vigour (1-5): 4

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input checked="" type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	bourbon
Surface:	<input checked="" type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: High altitude vigorous coffee population, subject to frosts, different from other types. Fruits and beans were often pointed. Fruit colour is red with yellowish stripes. Some variation is present for fruit colour, size and shape.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 014* 3. SITE NAME *El Kor*

4. DATE *24.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Tessawi type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arab*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Rusud/Tessa (or Tisah) valley*

12. LOCATION ± 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}25' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1580* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *60* AREA *375* sq. metres

19. NUMBER OF PLANTS SAMPLED *2* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Representative plants*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *PDRY 014A*

22. PHOTOGRAPH NUMBER *PDRY 014*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 014

Irrigation: flood

Plant age: 18 years

Spacing: 2,5 X 2,5 m

Soil texture: sandy loam

Fertilization: Yes, cattle manure, 1 bag per year.

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 4 (1,5 kg dry coffee per tree)

Vigour (1-5): 4

Tree:

Shape:	<input type="checkbox"/> conical	<input checked="" type="checkbox"/> intermediate	<input type="checkbox"/> cylindrical
Growth habit:	<input type="checkbox"/> open	<input checked="" type="checkbox"/> normal	<input type="checkbox"/> compact
Height:	<input checked="" type="checkbox"/> tall	<input type="checkbox"/> medium	<input type="checkbox"/> small
Nr. of stems or heads:	<input checked="" type="checkbox"/> one	<input checked="" type="checkbox"/> few	<input type="checkbox"/> many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/> semi-erect	<input checked="" type="checkbox"/> nearly hor.	<input type="checkbox"/> horizontal
Secondary branching:	<input checked="" type="checkbox"/> profuse	<input checked="" type="checkbox"/> normal	<input type="checkbox"/> slight
Internode length:	<input type="checkbox"/> long	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> short
Strength:	<input type="checkbox"/> thin-drooping	<input type="checkbox"/> average	<input checked="" type="checkbox"/> thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/> bronze	<input checked="" type="checkbox"/> light bronze	<input type="checkbox"/> green
Colour adult leaves:	<input checked="" type="checkbox"/> dark green	<input checked="" type="checkbox"/> green	<input type="checkbox"/> light green
Size:	<input checked="" type="checkbox"/> large	<input type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> typica	<input checked="" type="checkbox"/> intermediate	<input checked="" type="checkbox"/> bourbon
Surface:	<input type="checkbox"/> undulated	<input checked="" type="checkbox"/> intermediate	<input type="checkbox"/> flat

Fruits:

Nr. per axil:	<input type="checkbox"/> many	<input checked="" type="checkbox"/> average	<input type="checkbox"/> few
Size:	<input checked="" type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> pointed	<input type="checkbox"/> elongated	<input checked="" type="checkbox"/> elliptic
Size of disc:	<input type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small

Beans:

Size:	<input checked="" type="checkbox"/> large	<input type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> pointed	<input checked="" type="checkbox"/> elongated	<input checked="" type="checkbox"/> elliptic
Pea berries:	<input type="checkbox"/> many	<input checked="" type="checkbox"/> few	<input type="checkbox"/> none

Seeds:

Elephant beans (%):	<input checked="" type="checkbox"/> high	<input type="checkbox"/> medium	<input type="checkbox"/> low	<input type="checkbox"/> none
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Comments: Representative of Tessawi type, but more erect branching type than PDRY 010. Vigourous, productive trees. Sample PDRY 014A was taken from some more compact Tessawi type plants nearby, very few fruits were available.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 015* 3. SITE NAME *Diraa*

4. DATE *24.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Katii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Rusud/Erka (or Irqah) valley*

12. LOCATION ± 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}22' N$ N/S LONG $13^{\circ}50' E$ E/W ALTITUDE *1480* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *50* AREA *450* sq. metres

19. NUMBER OF PLANTS SAMPLED *1* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *One representative plant*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *PDRY 015A*

22. PHOTOGRAPH NUMBER *PDRY 015*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 015

Irrigation: flood

Plant age: \pm 20 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: cattle manure

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input checked="" type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input checked="" type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Katii type (Katy is upper part of the Ermi valley). Interesting type as fruits are large and beans elongated with low percentage elephant beans. Sample 015A was obtained from a larger population of Katii type plants, showing some variation.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/ AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 016* 3. SITE NAME *Katy*

4. DATE *26.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Katii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Rusud/Shaeab El Ermi valley*

12. LOCATION \pm 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}48' E$ E/W ALTITUDE 1730 m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND 50 AREA 450 sq. metres

19. NUMBER OF PLANTS SAMPLED 10 AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED?

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 016*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 016

Irrigation: flood

Plant age: \pm 100 years

Spacing: 3 X 3 m

Soil texture: sandy loam

Fertilization: manure

CHARACTERISTICS OF PLANTS:

Production capacity(1-5): 3 (1 kg/tree)

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/> conical	<input checked="" type="checkbox"/> intermediate	<input type="checkbox"/> cylindrical
Growth habit:	<input type="checkbox"/> open	<input checked="" type="checkbox"/> normal	<input type="checkbox"/> compact
Height:	<input type="checkbox"/> tall	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small
Nr. of stems or heads:	<input type="checkbox"/> one	<input type="checkbox"/> few	<input checked="" type="checkbox"/> many

Primaries:

Angle (10th node):	<input type="checkbox"/> semi-erect	<input checked="" type="checkbox"/> nearly hor.	<input type="checkbox"/> horizontal
Secondary branching:	<input type="checkbox"/> profuse	<input checked="" type="checkbox"/> normal	<input type="checkbox"/> slight
Internode length:	<input type="checkbox"/> long	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> short
Strength:	<input type="checkbox"/> thin-drooping	<input checked="" type="checkbox"/> average	<input type="checkbox"/> thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/> bronze	<input checked="" type="checkbox"/> light bronze	<input checked="" type="checkbox"/> green
Colour adult leaves:	<input checked="" type="checkbox"/> dark green	<input checked="" type="checkbox"/> green	<input type="checkbox"/> light green
Size:	<input type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> typica	<input checked="" type="checkbox"/> intermediate	<input type="checkbox"/> bourbon
Surface:	<input type="checkbox"/> undulated	<input checked="" type="checkbox"/> intermediate	<input checked="" type="checkbox"/> flat

Fruits:

Nr. per axil:	<input type="checkbox"/> many	<input checked="" type="checkbox"/> average	<input type="checkbox"/> few
Size:	<input checked="" type="checkbox"/> large	<input type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> pointed	<input checked="" type="checkbox"/> elongated	<input checked="" type="checkbox"/> elliptic
Size of disc:	<input type="checkbox"/> large	<input checked="" type="checkbox"/> medium	<input type="checkbox"/> small

Beans:

Size:	<input checked="" type="checkbox"/> large	<input type="checkbox"/> medium	<input type="checkbox"/> small
Shape:	<input type="checkbox"/> pointed	<input checked="" type="checkbox"/> elongated	<input checked="" type="checkbox"/> elliptic
Pea berries:	<input type="checkbox"/> many	<input checked="" type="checkbox"/> few	<input type="checkbox"/> none

Seeds:

Elephant beans (%):	<input type="checkbox"/> high	<input type="checkbox"/> medium	<input checked="" type="checkbox"/> low	<input type="checkbox"/> none
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Comments: Katii type, sampled from ten old plants in the Katy valley (upper part of the Shaeab el Ermi valley). Variation was present for colour of leaf flushes. The angle of the primaries was more horizontal than of PDRY 015.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 017* 3. SITE NAME -

4. DATE *26.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Local type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Rusud/Shaeab el Ermi valley*

12. LOCATION \pm 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}48' E$ E/W ALTITUDE 1620 m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND 100 AREA 1200 sq. metres

19. NUMBER OF PLANTS SAMPLED 1 AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *One represntative plant*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS No

22. PHOTOGRAPH NUMBER *PDRY 017*

23. HERBARIUM SAMPLE No

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 017

Irrigation: flood, but damaged terrace

Plant age: ± 15 years

Spacing: 3 X 4 m

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 2

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	short
Strength:	<input checked="" type="checkbox"/>	thin-drooping	<input type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input checked="" type="checkbox"/>	many	<input type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input checked="" type="checkbox"/>	many	<input type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input type="checkbox"/>	low	<input checked="" type="checkbox"/>	none
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Comments: Local compact type, with multiple stems; dwarf grower although conditions were bad. Lots of empty seeds and pea-berries. Out of season fruit setting, induced by irregular irrigation?

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 018* 3. SITE NAME -

4. DATE *26.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Odaynii type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Rusud/Hamoma valley*

12. LOCATION ± 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}20' N$ N/S LONG $13^{\circ}47' E$ E/W ALTITUDE *1610* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *100* AREA *1225* sq. metres

19. NUMBER OF PLANTS SAMPLED *1* AREA sq. metres

20. HOW WERE THE PLANTS SAMPLED? *One representative plant*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 018*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 018

Irrigation: flood only

Plant age: \pm 50 years

Spacing: 3,5 X 3,5 m

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2,5

Vigour (1-5): 3

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input checked="" type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Taken as prototype of Odaynii. Plant was sampled out of relative uniform population with some variation for fruit size and colour of leaf flushes (light bronze to green).

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 019* 3. SITE NAME -

4. DATE *27.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Local type, very old trees*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Rusud / Zalaman valley*

12. LOCATION ± 100 Km from *Aden* in a *north* direction

13. LAT $45^{\circ}15' N$ N/S LONG $13^{\circ}45' E$ E/W ALTITUDE *1800* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *25* AREA ± 700 sq. metres

19. NUMBER OF PLANTS SAMPLED *10* AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Randomly*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 019*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 019

Irrigation: flood

Plant age: 100 ?

Spacing: 3x4 m irregular

Soil texture: sandy loam

Fertilization: no

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2

Vigour (1-5): 4

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	compact
Height:	<input checked="" type="checkbox"/>	tall	<input type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Very old coffee plantation, at least 100 years. Some plants resemble Katii, others Odaynii type.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 020* 3. SITE NAME -

4. DATE *30.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Local type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY *Dhala / Ludia valley*

12. LOCATION \pm 120 Km from *Aden* in a *N/NW* direction

13. LAT *44°40' N* N/S LONG *13°45' E* E/W ALTITUDE *1540* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND 20 AREA 80 sq. metres

19. NUMBER OF PLANTS SAMPLED 15 AREA - sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Randomly*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 020*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 020

Irrigation: flood

Plant age: \pm 12 years

Spacing: 2 X 2 m

Soil texture: sandy

Fertilization: ?

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2

Vigour (1-5): 2

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	short
Strength:	<input checked="" type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	very short
					<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input checked="" type="checkbox"/>	green
Colour adult leaves:	<input type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input checked="" type="checkbox"/>	typica	<input type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input checked="" type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded
					<input checked="" type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	rounded
					<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Type named as 'Ludia compact'. Small typica type leaves with small fruits. Resembles a compact Essaii type.

ANNEX IV

COLLECTION FORMS

- CN NUMBER 469
- EXPEDITION *Coffee survey and collection*
- COUNTRY/AREA *P.D.R.Yemen*
1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*
2. COLLECTOR'S NUMBER *PDY 021* 3. SITE NAME -
4. DATE *30.04.89* (DD/MM/YY)
5. GENUS *Coffea*
6. SPECIES *arabica*
7. SUBSPECIES/VARIETY *Local population*
8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*
9. CONFIRMATION REQUIRED 1 Yes 2 No
10. COUNTRY *P.D.R. Yemen*
11. DISTRICT/VALLEY *Dhala/Ludia + Hewle valley*
12. LOCATION \pm 120 Km from *Aden* in a *N/NW* direction
13. LAT *44°40' N* N/S LONG *13°45' E* E/W ALTITUDE *1540 - 1650 m*
14. MAP NAME AND REFERENCE *ANNEX I, II, III*
15. STATUS OF SAMPLE
1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)
16. COLLECTION SOURCE
1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute
17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)
18. NUMBER OF PLANTS FOUND *large* AREA - sq. metres
19. NUMBER OF PLANTS SAMPLED \pm 50 AREA - sq. metres
20. HOW WERE THE PLANTS SAMPLED? *Representing local variation*
21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS No
22. PHOTOGRAPH NUMBER *No photo taken*
23. HERBARIUM SAMPLE No

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 021

Irrigation: flood

Plant age: variable

Spacing: variable

Soil texture: sandy loam

Fertilization: -

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 2-3

Vigour (1-5): 2-4

Tree:

Shape:	<input checked="" type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input checked="" type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input checked="" type="checkbox"/>	many

Primaries:

Angle (10th node):	<input checked="" type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input checked="" type="checkbox"/>	profuse	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	short
Strength:	<input checked="" type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input checked="" type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typical	<input checked="" type="checkbox"/>	intermediate	<input checked="" type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small

Beans:

Size:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input checked="" type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input type="checkbox"/>	medium	<input checked="" type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Grouped sample, taken from several sites in Ludia valley and Hewle (side valley). Plants resembled normal or quite compact Odaynii types, with small or medium sized leaves, fruits and beans.

ANNEX IV

COLLECTION FORMS

CN NUMBER 469

EXPEDITION *Coffee survey and collection*

COUNTRY/AREA *P.D.R.Yemen*

1. COLLECTOR (S) *A.B. Eskes and A.W. O'Mukred*

2. COLLECTOR'S NUMBER *PDRY 022* 3. SITE NAME *Hewle*

4. DATE *30.04.89* (DD/MM/YY)

5. GENUS *Coffea*

6. SPECIES *arabica*

7. SUBSPECIES/VARIETY *Local type*

8. LOCAL NAME *Bon* LANGUAGE/ETHNIC GROUP *Arabic*

9. CONFIRMATION REQUIRED 1 Yes 2 No

10. COUNTRY *P.D.R. Yemen*

11. DISTRICT/VALLEY

12. LOCATION \pm 120 Km from *Aden* in a *N/NW* direction

13. LAT *44°40' N* N/S LONG *13°45' E* E/W ALTITUDE *1640* m

14. MAP NAME AND REFERENCE *ANNEX I, II, III*

15. STATUS OF SAMPLE

1. Wild 2. Weedy X3. Primitive cultivar/landrace
4. Advance cultivar 5. Breeding line 6. Other (specify)

16. COLLECTION SOURCE

1. Wild habitat X2. Farmland 3. Farmstore 4. Backyard
5. Village market 6. Commercial market 7. Institute

17. TYPE OF SAMPLE X1. Seed 2. Vegetative (specify)

18. NUMBER OF PLANTS FOUND *50* AREA *1500* sq. metres

19. NUMBER OF PLANTS SAMPLED *1* AREA *-* sq. metres

20. HOW WERE THE PLANTS SAMPLED? *Representative plant*

21. OTHER SAMPLES FROM THE SAME GROUP OF PLANTS *No*

22. PHOTOGRAPH NUMBER *PDRY 022*

23. HERBARIUM SAMPLE *No*

ANNEX IV (cont.)

ADDITIONAL OBSERVATION

Sample nr: PDRY 022

Irrigation: flood

Plant age: \pm 6 years

Spacing: 2,5 X 2,5 m

Soil texture: sandy loam

Fertilization: ?

CHARACTERISTICS OF PLANTS:

Production capacity (1-5): 3

Vigour (1-5): 4

Tree:

Shape:	<input type="checkbox"/>	conical	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	cylindrical
Growth habit:	<input type="checkbox"/>	open	<input checked="" type="checkbox"/>	normal	<input checked="" type="checkbox"/>	compact
Height:	<input type="checkbox"/>	tall	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Nr. of stems or heads:	<input type="checkbox"/>	one	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	many

Primaries:

Angle (10th node):	<input type="checkbox"/>	semi-erect	<input checked="" type="checkbox"/>	nearly hor.	<input type="checkbox"/>	horizontal
Secondary branching:	<input type="checkbox"/>	profuse	<input type="checkbox"/>	normal	<input checked="" type="checkbox"/>	slight
Internode length:	<input type="checkbox"/>	long	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	short
Strength:	<input type="checkbox"/>	thin-drooping	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	thick-strong

Leaves:

Colour of flushes:	<input type="checkbox"/>	bronze	<input checked="" type="checkbox"/>	light bronze	<input type="checkbox"/>	green
Colour adult leaves:	<input checked="" type="checkbox"/>	dark green	<input checked="" type="checkbox"/>	green	<input type="checkbox"/>	light green
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	typica	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	bourbon
Surface:	<input type="checkbox"/>	ondulated	<input checked="" type="checkbox"/>	intermediate	<input type="checkbox"/>	flat

Fruits:

Nr. per axil:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	average	<input type="checkbox"/>	few
Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Size of disc:	<input type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input checked="" type="checkbox"/>	rounded

Beans:

Size:	<input checked="" type="checkbox"/>	large	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	small
Shape:	<input type="checkbox"/>	pointed	<input type="checkbox"/>	elongated	<input checked="" type="checkbox"/>	elliptic
Pea berries:	<input type="checkbox"/>	many	<input checked="" type="checkbox"/>	few	<input type="checkbox"/>	none

Seeds:

Elephant beans (%):	<input type="checkbox"/>	high	<input checked="" type="checkbox"/>	medium	<input type="checkbox"/>	low	<input type="checkbox"/>	none
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Comments: Type named as 'Hewle compact'. Resembling Odaynii but more dwarf and relative high percentage of elephant beans. Vigourous coffee type.

List of Persons Met and Travel Schedule

1. List of Persons Met

Dr. Abdul W.O. Mukred, Director of the Research and Extension Department,
Ministry of Agriculture

Dr. Abdulla Ali Abdulla, Deputy Director of the Research and Extension
Department, Ministry of Agriculture

Dr. Ab.S. Mu'Allem, Director of the El-Kod Agricultural Research Center

Mr. Moustapha M. Saqqat, Researcher at El-Kod Agricultural Research Center

Mr. Ali Salem, Director of Agriculture, Rusud District

Mr. Abdul-Rab Saleh Ali, Director of Agriculture, Yaffaa District

Dr. J.S. Bakshi, FAO Team Leader, World Bank Project, Aden

Mr. Albert Abi-Aad, Cultural Representative, French Embassy, Aden

Mr. Jean-Pierre Margot, Commercial Representative, French Embassy, Aden

Dr. G. Blaak, Senior Officer, Industrial Crops, AGP, FAO, Rome

Mr. D.H. van Sloten, IBPGR Acting Director

Dr. Y. Adham, IBPGR Coordinator for N. Africa, S.W. Asia and Europe

2. Travel Schedule

13.04.89 Montpellier - Rome

14.04.89 Rome - Aden

15-16.04.89 Preparation of coffee survey

17-21.04.89 Survey and collection in the Yaffaa district

21-22.04.89 Preparation of coffee samples, Aden

23.04-01.05.89 Survey and Collection in the Rusud and Dhala district

02-06.05.89 Preparation of samples, writing the report

04.05.89 Visit to French Embassy, Aden

05.05.89 Visit to the citrus and coffee nursery in Laudar

07.05.89 Aden - Rome

08-09.05.89 IBPGR - Rome, writing the report, discussions

10.05.89 Rome - Montpellier